



Adsorbents and Catalyst

ACTIVATED  
ALUMINAS

Selexsorb® CDX

## Optimum adsorbent for polar organic compounds

### Product Information

Selexsorb® CDX is a smooth, spherical adsorbent, custom formulated to provide optimum adsorption capacity for a wide range of polar organic compounds including: sulfur based molecules (mercaptans, sulfides, disulfides, thiophenes); nitrogen based molecules (nitriles, amines, amides, pyridines); and oxygenated hydrocarbon molecules (alcohols, glycols, aldehydes, ketones, ethers, peroxides). Selexsorb CDX is available as 7 x 14 Tyler mesh, and 1/8" spheres, packaged in vapor barrier drums, and sling bins.

### Product Applications

1. The isobutylene feedstream to MTBE (methyl tertiary butyl ether) processes often contain nitrogen and sulfur based organic contaminants which can deactivate the ion exchange resin type etherification catalyst. Likewise, isoamylene feedstreams to TAME (tertiary amyl methyl ether) production processes contain impurities which adversely effect the macroporous ion exchange resin catalyst as well as the palladium impregnated hydrogenation catalyst installed in TAME process reactors. Selexsorb CDX

is an excellent selective adsorbent for the removal of the following contaminants from isobutylene and isoamylene feedstreams to these etherification processes: ammonia; acetonitrile; propionitrile; dimethyl formamide; various amines; dimethyl sulfide; methyl, ethyl and propyl mercaptans; dimethyl disulfide; thiophenes as well as H<sub>2</sub>O.

2. The C<sub>4</sub> raffinate stream from MTBE production processes and the C<sub>5</sub> raffinate stream from TAME production processes contain oxygenates which often require removal to assure a contaminant-free feed stream to petroleum refining and petrochemical processes. Removal of oxygenates such as methanol, dimethyl ether, tertiary butyl alcohol, MTBE and TAME from these raffinate streams can be accomplished by use of Selexsorb CDX.

3. Selexsorb CDX is custom formulated to remove a wide variety of nitrogen, sulfur and oxygen based organic contaminants from liquid hydrocarbon feedstreams to catalytic processes such as isomerization, dehydrogenation and hydrogenation. Catalyst protection is assured with the use of Almatis' selective adsorbents.

### Typical Properties of Selexsorb CDX

#### Physical

	7x14 Tyler Mesh (2.0mm)	1/8 inch (3.2mm)
Surface area	460 m <sup>2</sup> /gram	450 m <sup>2</sup> /gram
Alumina XRD phase	Amorphous chi, & gamma	Amorphous chi, & gamma
Crush Strength	9 lbs (4 kgs)	25 lbs (11 kgs)
Packed Bulk Density	41.5 lb/ft <sup>3</sup> (665 kgs/m <sup>3</sup> )	41.5 lb/ft <sup>3</sup> (665 kgs/m <sup>3</sup> )

#### Chemical

	wt%
Al <sub>2</sub> O <sub>3</sub> + Proprietary Modifier	95.1
Trace impurities	0.4
LOI (250 - 1200°C)	4.5

Information presented herein is believed to be accurate and reliable but is not intended to meet any specification and does not imply any guarantee or warranty by Almatis.

MSDS Number-594

PRODUCT  
DATA

USA/4140-R02/0104

Page 1 of 1

United States of America & Latin America  
Almatis AC, Inc.

Adsorbents & Catalysts

109 Highway 131, Vidalia, LA 71373 USA

Phone: 800-533-4511 or 318-336-9601 Fax: 318-336-9922

Webste: www.almatis.com Email: adcats@almatis.com

Europe Frankfurt, Germany • Asia Tokyo, Japan

